

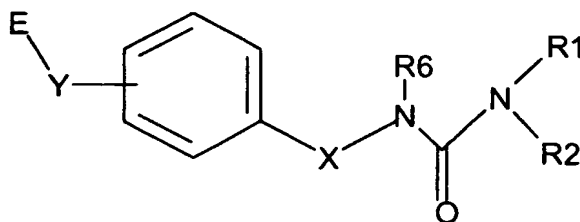
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CLAIMS

What is claimed is:

1. A Compound of the structural formula I:

5 Formula I



and pharmaceutically acceptable salts, solvates and
hydrates thereof, wherein:

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(a) R1, R2 and R6 are each independently selected from
the group consisting of hydrogen, C₁-C₈ alkyl,
substituted C₁-C₈ alkyl, aryl-C₀₋₄-alkyl,
substituted aryl-C₀₋₄-alkyl, C₃-C₆ cycloalkyl,
substituted C₃-C₆ cycloalkyl, heteroaryl-C₀₋₄-
15 alkyl, substituted heteroaryl-C₀₋₄-alkyl, C₃-C₆
cycloheteroalkylaryl-C₀₋₂-alkyl, substituted C₃-C₆
cycloheteroalkylaryl-C₀₋₂-alkyl, C₃-C₆
cycloalkylaryl-C₀₋₂-alkyl and substituted C₃-C₆
20 cycloalkylaryl-C₀₋₂-alkyl; wherein the
substituents for said substituted alkyl,
arylalkyl, cycloalkyl, heteroarylalkyl,
cycloheteroalkylarylalkyl, and cycloalkylarylalkyl
are from one to three substituents each
25 independently selected from R1';

(b) R1', R3', R4' and R19' are each independently
selected from the group consisting of H, C1-C5

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alkyl, C₁-C₅ alkoxy, C₁-C₅ haloalkyl, C₁-C₅ haloalkoxy, nitro, cyano, CHO, hydroxyl, arylC₀-C₅alkoxy, arylC₀-C₅alkyl, alkylcarboxamido and COOH;

5 (c) X is an optionally substituted C₁-C₅ alkylene linker wherein one carbon atom of the linker may be replaced with O, NH or S;

(c) Y is C, O, S, NH or a single bond; and

10 (d) E is selected from the group consisting of hydrogen, C(R₃)(R₄)A, A, and (CH₂)_n COOR₁₉; wherein said (CH₂)_n COOR₁₉ is optionally substituted with a group selected from C₁-C₅ alkyl, arylC₀-C₅alkoxy, and arylC₀-C₅alkyl; and wherein

15 (i) n is 0, 1, 2 or 3,

(ii) A is selected from the group consisting of carboxyl, C₁-C₃alkylnitrile, carboxamide, sulfonamide, substituted sulfonamide, acylsulfonamide, substituted acylsulfonamide, 20 tetrazole and substituted tetrazole;

(iii) R₃ is selected from the group consisting of H, C₁-C₅ alkyl, and C₁-C₅ alkoxy, wherein said alkyl and alkoxy are each optionally substituted with from one to three 25 substituents each independently selected from R₃' ;

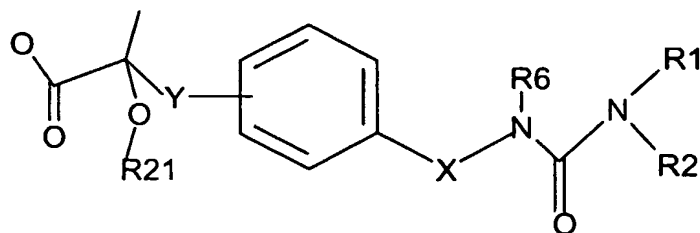
(iv) R₄ is selected from the group consisting of H, halo, C₁-C₅ alkyl, C₁-C₅ alkoxy, C₃-C₆ cycloalkyl, aryl C₀-C₄ alkyl, and arylC₀-C₂alkoxy, or R₃ and R₄ are optionally 30 combined to form a C₃-C₄ cycloalkyl, and

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wherein said alkyl, alkoxy, cycloalkyl, arylalkyl, and arylalkoxy are each optionally substituted with from one to three substituents each independently selected from R4'; and

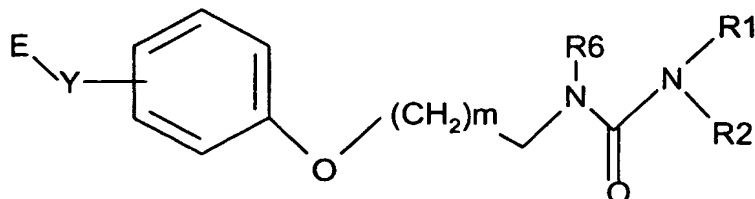
(e) R19 is selected from the group consisting of hydrogen, arylmethyl, and C1-C4alkyl, wherein said arylmethyl and C1-C4alkyl, are each optionally substituted with from one to three substituents each independently selected from R19'.

2. A compound as claimed by Claim 1 of the structural formula II:



wherein R21 is selected from the group consisting of phenyl, substituted phenyl, and C₁-C₆ alkyl.

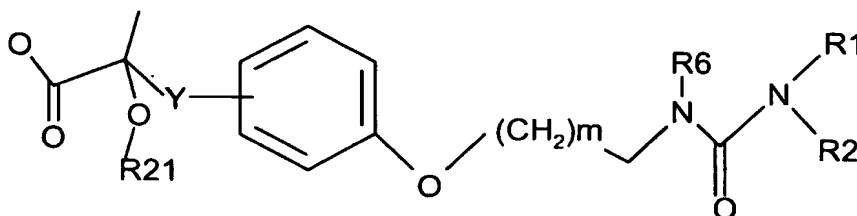
3. A compound as claimed by Claim 1 that is of the following structural formula III:



m is 0, 1, or 2.

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4. A compound as claimed by Claim 1 that is of the structural formula IV:



5 m is 0, 1, or 2, wherein R₂₁ is selected from the group consisting of phenyl, substituted phenyl, and C₁-C₆ alkyl..

5. A compound as claimed by any one of Claims 1, 2, 3 or 4 wherein R₆ is selected from the group consisting of hydrogen, substituted C₁-C₄ alkyl, C₁-C₄ alkyl, substituted aryl-C₀-₄-alkyl, and aryl-C₀-₄-alkyl.

6. A compound as claimed by any one of Claims 1, 3, or 5 wherein E is A.

7. A compound as claimed by any one of Claims 1, 3, 5 or 6 wherein A is COOH.

15 8. A compound as claimed by any one of Claims 1, 2, 3, 4, 5, 6 or 7 wherein Y is O.

9. A compound as claimed by any one of Claims 1, 2, 3, 4, 5, 6, or 7 wherein Y is C.

20 10. A compound as claimed by any one of Claims 1 through 9 wherein R₄' substituents are selected from the group consisting of arylalkyl, aryl, arylalkoxy, aryloxy, and alkyl.

11. A compound as claimed by any one of Claims 1, 3, 5, 8, 9, or 10 wherein aryl is substituted phenyl.

25 12. A compound as claimed by any one of Claims 1 through 11 wherein R₂ is hydrogen and R₁ is substituted phenyl.

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13. A compound as claimed by Claim 1 or 12 wherein substituted phenyl is substituted with a group selected from aryl, aryloxy, and arylalkyloxy.

14. A compound as claimed by any one of Claims 1-13 wherein X is optionally substituted C₂-C₅ alkylene.

15. A compound as claimed by any one of Claims 1-13 wherein X is -O-(CH₂)_m-.

16. A compound as claimed by any one of Claims 1 through 15 wherein the E-Y group is in the para position in relation to the X linker.

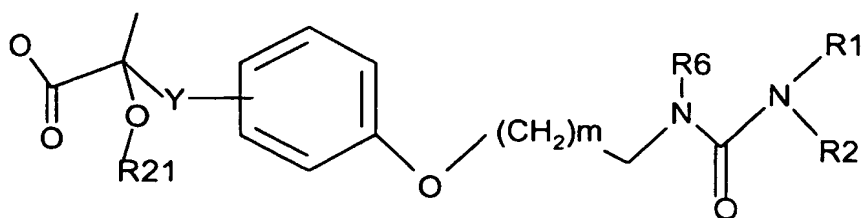
17. A compound as claimed by any one of Claims 1 through 10, Claim 14, Claim 15, or Claim 16 wherein R₁ is selected from unsubstituted phenyl and substituted phenyl, and R₆ is hydrogen.

18. A compound as claimed by any one of Claims 1 through 17 wherein R₁ is substituted phenyl wherein the phenyl substituent is one or two independently selected from the group consisting of CF₃, C₁-C₄ alkyl, and halo.

19. A compound as claimed by any one of Claims 1 through 18 wherein R₁ is substituted phenyl and R₂ is hydrogen.

20. A compound as claimed by any one of Claims 1, 5, 12, 13, 17 through 19 represented by the following structural

Formula:



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wherein R21 is selected from the group consisting of phenyl, substituted phenyl, and C₁-C₆ alkyl.

21. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and at least one compound as claimed by any one of Claims 1-20.

22. A method of modulating a peroxisome proliferator activated receptor, comprising the step of contacting the receptor with at least one compound as claimed by any one of Claims 1-20.

23. A method of treating diabetes mellitus in a mammal, comprising the step of administering to the mammal in need thereof, a therapeutically effective amount of at least one compound of Claims 1-20.

24. A method of preventing diabetes mellitus in a mammal, comprising the step of administering to the mammal in need thereof, an effective amount of at least one compound of Claims 1-20.

25. A method of treating Syndrome X in a mammal, comprising the step of administering to the mammal in need thereof, a therapeutically effective amount of at least one compound of Claims 1-20.

26. Use of a compound for the manufacture of a medicament for the treatment of a condition modulated by a peroxisome proliferator activated receptor, wherein the compound, is a at least one compound of Claims 1-20.

27. A compound as disclosed by any one of the examples herein.